

Serial No. 09/685,260

Atty. Docket No. 13DV13523

REMARKS

The Examiner has rejected claims 1-3, 5 and 11 under 35 U.S.C. § 102(b) as being anticipated by Howard et al. This ground of rejection is respectfully traversed.

Independent claim 1 recites a method of using a computer to generate an ultrasonic inspection planning for a part, wherein the ultrasonic inspection planning contains information needed to meet specification requirements for an ultrasonic inspection. The method comprises collecting data relating to the ultrasonic inspection planning, using the data to calculate inspection parameters, and outputting a set of inspection planning based on the calculated parameters.

In contrast to the present invention, Howard involves a method for detecting and characterizing flaws in an object using an ultrasonic inspection system 10 and does not involve ultrasonic inspection planning. Ultrasonic inspection is a technique of inspecting the surface of an object for defects and is distinguishable from ultrasonic inspection planning, which involves developing a plan for how to carry out ultrasonic inspection. More specifically, an ultrasonic inspection plan is developed for a part design to insure that full and consistent ultrasonic inspections can be carried out (see page 2 of the present specification). Developing such an inspection plan involves determining inspection parameters such as the speed at which the part will be rotated, the surface speed of the part, how fast the transducer will be indexed with respect to the part, pulse repetition rate and scan length. As described on page 3 of the present specification, an inspection planning contains all of the information (e.g., part nomenclature, standard instructions, inspection coverage, inspection zone sketch, inspection sequence, equipment parameters and revision history) needed to meet specification requirements for an ultrasonic inspection. Howard

Serial No. 09/685,260

Atty. Docket No. 13DV13523

discloses a method for carrying out ultrasonic inspection generally and does not disclose or discuss a method of generating an ultrasonic inspection planning.

Furthermore, Howard does not disclose the method steps recited in claim 1. Specifically, Howard does not describe collecting data relating to an ultrasonic inspection planning, using that data to calculate inspection parameters, and outputting a set of inspection planning based on the calculated parameters. The method of Howard comprises scanning an object surface with a transducer transmitting ultrasonic sound waves at a plurality of scanning positions. The ultrasonic sound waves reflected from the object are detected with the transducer at each scanning position. The detected sound waves contain signals from the volume of the object that are represented by a set of reconstruction points. While these reconstruction points are arguably "collected data," this is physical data that relates to the particular object being inspected; it is simply not data relating to an ultrasonic inspection planning, as required by claim 1. In addition, Howard does not describe using the data to calculate inspection parameters. Instead, Howard uses the data to create an image of the object's interior. Lastly, Howard does not produce a set of inspection planning based on calculated parameters. As mentioned above, Howard does not contemplate inspection planning at all.

For the above reasons, it is respectfully submitted that independent claim 1 is allowable over Howard. Claims 2, 3, 5 and 11 depend from claim 1 and are thus also believed to be allowable.

The Examiner has rejected claims 36-40, 42, 43, 45 and 46 under 35 U.S.C. § 102(b) as being anticipated by Barrett et al. This ground of rejection is respectfully traversed.

Independent claim 36 recites a system for automatically generating an ultrasonic inspection planning for a part, wherein the ultrasonic inspection planning contains information needed to meet specification requirements for an ultrasonic inspection. The system comprises a means for displaying an input

Serial No. 09/685,260

Atty. Docket No. 13DV13523

screen for prompting a user to input data relating to the part, means for calculating inspection parameters from the data, and means formatting the calculated parameters into an inspection plan document.

Barrett discloses a computer-based system and method for providing NDI (non-destructive inspection) information to a crew building parts. As described in column 2, this includes gathering NDI information about the parts, gathering other information, such as repair information, linking the NDI and other information, and storing the linked information in a database. As further described in lines 37-40 of column 5, Barrett provides a method and system that captures, stores, and retrieves ultrasonic inspection results. Just like the Howard reference discussed above, Barrett relates to actual ultrasonic inspection, not ultrasonic inspection planning. For the reasons set forth above, ultrasonic inspection and ultrasonic inspection planning are distinct activities.

Furthermore, Barrett does not disclose the claimed means for displaying an input screen for prompting a user to input data relating to the part. While Barrett does mention in lines 7-9 of column 5 use of "input fields" that document the part status and inspection results, there is no indication that this is used to collect data from which inspection parameters could be calculated. The data collected by Barrett is NDI information obtained by ultrasonically scanning parts as they are manufactured to identify part defects. Barrett clearly does not disclose means for calculating inspection parameters from the data or means formatting the calculated parameters into an inspection plan document.

For the above reasons, it is respectfully submitted that independent claim 36 is allowable over Howard. Claims 37-40, 42, 43, 45 and 46 depend from claim 36 and are thus also believed to be allowable.

The Examiner has rejected claims 6, 8, 10, 12-14, 16, 18-21, 23-27, 29-32, 34 and 35 under 35 U.S.C. § 103(a) as being unpatentable over Howard et al in view of Barrett et al, and claims 7, 15, and 28 under 35 U.S.C. § 103(a)

Serial No. 09/685,260

Atty. Docket No. 13DV13523

as being unpatentable over Howard et al in view of Barrett et al and further in view of Dwyer. These grounds of rejection are respectfully traversed.

Both of independent claims 12 and 25 involve ultrasonic inspection planning for a part. As discussed above, neither Howard nor Barrett relate to ultrasonic inspection planning. Howard relates an ultrasonic inspection method and Barrett involves a system and method for capturing and storing the results of ultrasonic inspection. Neither references describes the claimed steps of displaying an input screen for prompting a user to input data relating to the ultrasonic inspection planning, calculating inspection parameters from the data, and formatting the calculated parameters into an inspection plan document. Given that neither reference teaches these features, the combination of Howard and Barrett also fails to render the claims unpatentable. Accordingly, it is respectfully submitted that independent claims 12 and 25 are allowable over Howard in view of Barrett. Claims 6, 8, 10, 13, 14, 16, 18-21, 23, 24, 26, 27, 29-32, 34 and 35 depend from claim 12 or 25 and are thus also believed to be allowable. With respect to claims 7, 15 and 28, the Dwyer reference is relied on for a teaching of the use of rotating speed. As such, Dwyer does not overcome the deficiencies of Howard and Barrett. Thus, Howard and Barrett, even when modified by Dwyer, still fail to render the independent claims unpatentable for the reasons set forth above. Dependent claims 7, 15 and 28 are thus also believed to be allowable.

Applicant notes with appreciation the indication that claims 4, 9, 17, 22, 33, 41 and 44 would be allowable if rewritten to include all the limitations of the base claim and any intervening claims. However, in view of the above remarks submitting that the independent claims are allowable, it is felt that the rewriting of these claims is not necessary.

Serial No. 09/685,260

Atty. Docket No. 13DV13523

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration of the objections and rejections is requested. Allowance of claims 1-46 at an early date is solicited.

Respectfully submitted,

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Date

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